भारत सरकार
अन्तरिक्ष विभाग
सतीश धवन अंतरिक्ष केन्द्र
शार
श्रीहरिकोटा डा.घ.524124 आं.प्र. भारत
टेलिफोन:+91 8623 225023
फेक्स: +91 8623 225170

Government of India
Department of Space
Satish Dhawan Space Centre
SHAR
SRIHARIKOTA P.O. 524124, AP, INDIA
Telephone: +91 8623 225023
Fax: +91 8623 225170

GOVERNMENT OF INDIA :: DEPARTMENT OF SPACE
SATISH DHAWAN SPACE CENTER SHAR :: SRIHARIKOTA – 524 124
SRI POTTI SREERAMULU.NELLORE DISTRICT (A.P)

TENDER NOTICE NO. SDSC SHAR/HPS/PT/04/2014-15

On behalf of President of India, Head Purchase and Stores, SDSC SHAR, SRIHARIKOTA invites **Expression of interest** for the following:

Sl No	Ref. No.	Description	Tender Fee
01	**SHAR VAST SVAB** **Ref: SDSC SHAR /HPS /PT /04 /2014-15**	**Expression of Interest for construction of Second Vehicle Assembly Building at SDSC SHAR, Sriharikota**	**₹.230/-**

Last Date for issue of EOI documents : **25.06.2014 at 16:00 Hours**
Due Date for receipt of EOI : **27.06.2014 at 12:00 Hours**
EOI Opening Date : **27.06.2014 at 14:00 Hours**

Instructions to Tenderers:

For full details/ scope of work and terms and conditions etc., please see the enclosed annexures.

1. Tender documents can be had from Sr. P & SO, Purchase, SDSC SHAR, Sriharikota –524 124, SPSR Nellore Dist. A.P.

2. Tender Fee shall be paid in form of CROSSED Demand Draft only. The Demand Draft should be in favour of Accounts Officer, SDSC-SHAR drawn on State Bank of India, Sriharikota. The Tender Fee is NON-REFUNDABLE. Your request letter along with Tender Fee may be addressed to the Sr. Purchase & Stores Officer as indicated above.

3. Interested tenderers may, at their option, download the tender documents from the ISRO website www.isro.org & www.shar.gov.in and submit the Expression of Interest along with the prescribed tender fee as per details given in the tender notification.

4. While requesting for Tender Documents, please superscribe on the cover as “Request for Tender document against Tender Notice No. **SDSC SHAR/HPS/PT/04/2014-15**

5. Expression of Interest received after the due date/time will not be considered.

6. While sending Expression of Interest, superscribe respective Tender Number and Due Date on the envelope.

7. SDSC-SHAR, Sriharikota is not responsible for any postal delays/loss of documents in transit.

8. Head, Purchase and Stores, SDSC-SHAR, Sriharikota reserves the right to accept or reject any/or all the quotations/Expression of Interest in part or full.

DT: 22.05.2014

HEAD, PURCHASE AND STORES

EXPRESSION OF INTEREST FOR CONSTRUCTION OF
SECOND VEHICLE ASSEMBLY BUILDING
AT SDSC SHAR, ISRO, SRIHARIKOTA

Satish Dhawan Space Centre SHAR (SDSC SHAR), popularly known as space port of India, is one of the units of Indian space research Organization, Department of Space, Govt. of India. SDSC SHAR is located 100 km north of Chennai, engaged in launching satellites using various launch vehicles. These launch vehicles are integrated in the existing vehicle assembly & integration buildings and transferred to launch pad for launching. SDSC SHAR proposes to augment the integration facilities by releasing one more vehicle assembly building viz. Second Vehicle Assembly Building (SVAB). The configuration of building is enclosed in the technical document, which narrates different features of the building and a very brief technical specifications enclosed in Annexure-I.

SDSC SHAR is looking for reputed construction company to realize the building within a schedule time span of 24 months. The total scope of work includes Civil, Electrical, AC & PH works and parties are expected realize all the facilities in turn key mode.

Interested parties shall submit the information in the enclosed vendor evaluation format given in Annexure-II, with in one month from the date of advertisement. All the vendors will be evaluated against the qualification criteria enclosed in the Annexure-III to this document. All the short listed vendors will be issued RFP for construction works, which contains detailed technical specification and price bid format for submitting offers.

The filled vendor evaluation formats along with supporting documents shall be sent to Head, Purchase & Stores, SDSC SHAR, Sriharikota on or before 27.06.2014 @ 1400 hrs. The information furnished is liable to be verified and any mis-representation may lead to disqualification of the applicant from the tendering process.

Annexure-1

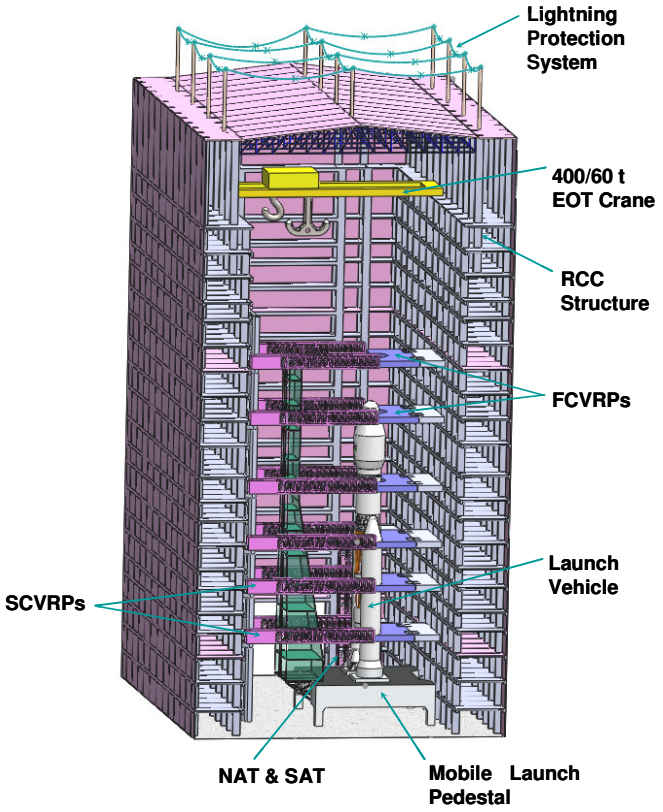
SECOND VEHICLE ASSEMBLY BUILDING (SVAB)

Satish Dhawan Space Centre SHAR (SDSC SHAR) is located at Sriharikota, Andhra Pradesh, about 100 km North of Chennai. To increase the launch frequency and meet requirements of future launch vehicles, a Second Vehicle Assembly Building (SVAB) is proposed to be built to connect with SLP.

SVAB is mainly intended for receiving the segments / stages / sub-systems of the launch vehicle, tilting them inside the facility wherever required, integrating them on a Mobile Launch Pedestal (MLP), performing checkout operations (stage level & full scope) and rolling out the vehicle for launch from SLP.

SVAB is a fully air-conditioned concrete structure of suitable dimensions, which provides a comfortable and controlled environment for integration of the launch vehicle. The facility is equipped with various platforms for facilitating the intergration of vehicle. The internal design view of the building is shown below.

All the design drawings will be supplied by Department along with the tender.



1. SCOPE OF WORK

a. CIVIL STRUCTURE

SVAB is basically a RCC framed structure of clear internal width 34.0 m, length 70.0 m and height (at spring level) as 96.0 m. It is provided with necessary embedments for supporting EOT crane, fixed platforms/catwalks and guide columns for platforms. Whole building being the load bearing framed RCC structure, all sides are closed with RCC walls other than the door opening area. Cat walks are provided along the portals on both sides at all floor levels connected on the rear side above 20.0 m. Embedments are provided for fixing doors and their mechanisms and also for the requirements of elevator. Stair cases are provided for access to various levels. Rails are laid in flush with floor for MLP movement from one side of SVAB. Anchors are provided on floor on either side of the track for anchoring the MLP during vehicle integration. The design is not included in the scope of work. The construction drawings will be issued by Department for execution.

Functional Requirement

- It shall be weather proof and air-conditioned enclosure for Launch vehicle during integration and checkout activities.
- Ground flooring shall be designed to carry the 30 t / axle loads of trailers
- Foundations shall be provided for MLP rail track suitable for 125 t wheel load and for four ground anchors to support 600 t load each.
- The building shall have provisions to house AHUs, AC ducts, satellite cooling ducts, pipelines for Helium, Nitrogen & Compressed air service, trenches/ ducts for power, checkout & communication cables.
- The space available in between portal frames is used for accommodating lifts, stair cases, A/C plant equipment, satellite cooling system, air handling units, drive mechanisms and diversion pulleys of platforms & doors, duct for service gas lines, checkout, power & control cables and to position integration platforms & equipments.
- The embedments/provisions are required to be provided for cat walks, platforms & drive mechanisms, Nozzle and Segment Assembly Towers, doors & drive mechanisms, cranes, elevator , A/C, Air Handling Units, satellite cooling system,

ducts for service pipe lines, Checkout and power cable trays, light fittings, lightning arrester masts, maintenance cradle etc.

- Embedments shall be provided on portal frames to support four guide columns, two on either side of vehicle. These guide columns shall be connected with the embedments of the structure at all floor levels starting from 13.0 m level to 70.0 m level. Guide columns form part of platforms whereas the embedments to reach up to guide columns form part of the building structure.
- Hand rails shall be provided on all catwalks and around all floor cut outs and on roof top.
- The building shall be provided with necessary openable type glass windows for getting natural light as well as for ventilation purpose.
- Embedments shall be required for the LT girder of 400/60 t crane (crane LT rail top is 82.0m).

Specifications

- The building is designed for basic wind speed (10m height) of 50 m/s (i.e.,180 kmph) with k1 factor as 1.28, k2 corresponding to the building height & k3 factor as 1 in accordance with IS 875 Part III
- The building is a framed structure with concrete walls and catwalks.
- The tentative external dimensions of the building are of 70.0 m length, 50.0 m width, and height up to spring level from rail top being 96.0 m.
- 400 t crane rail top level: 82.0 m and span 35.5 m
- Number of floors: 22 with floor levels: 0.0 m, 4 m, 7.0 m, 11.0 m, 15.0 m, 19.0 m, 23.0 m, 27.0 m, 31.0 m, 35.0 m, 38.0 m, 42.0 m, 47.0 m, 51.0 m, 55.0m, 59.0 m, 63.0m, 67.0 m, 70.0m, 74.0 m, 78.0 and 82.0 m
- The wall on front face is extended on either side to support Horizontal Sliding Doors.
- The width of the portal is 8.0 m
- The width of the side walls above crane LT rail is reduced to accommodate crane girders.

b. Electrical systems

The scope includes, the power distribution scheme of the SVAB and associated equipment which ensure reliability, availability and clean power within acceptable tolerance limits to the SVAB and associated facilities fall under the electrical systems of SVAB. The designs, specifications and line diagrams will be supplied by Department and hence are not included in this scope.

Internal Electrification: Constitutes MV panels, MCCs, LDBs, PDBs lighting, area lighting, street lighting, cabling, earthing and lightning protection systems within the facilities including cabling

Auto-changeover: Circuits used for carrying out changeover between two incoming power source feeders in the event of failure of one of the sources and unhealthy conditions like low voltage, phase failure, earth fault on incoming side etc. switching to be accomplished by contactor / ACB depending upon the load connected to the circuit.

Specifications:

Internal electrification is classified into two areas. One is power distribution for illumination, etc. and second is power distribution for mechanisms like E O T crane, Platforms, doors, elevators, maintenance CRADLE etc. of all facilities.

1. LIGHTING &POWER OUTLETS A) Illumination	At all platform levels-Hazardous area classified as group-IIB Around Vehicle: 350 lux at a height of 1m. All other areas: 250 lux in fixed platforms and 200 lux in catwalks.
A.1) Type of light fittings	Non-FLP fittings at portal areas and panel rooms. Flame Proof group- II B fittings in all other areas.
A.2) Outside Illumination	Non-FLP light fittings on either outer side at a height of around 17 m
A.3) Control Switch	In MV panel room with MCB control

A.4) Emergency lighting	Throughout SVAB including catwalks, lifts, staircase, panel rooms, working platforms, fixed platforms etc. with CFL/LED lamps. Centralized emergency lighting system to be located at 0.0 m EL and operated with maintenance free batteries
B. POWER Outlets	
B.1) Single phase 16A, 5A flameproof / Non-FLP plug sockets	Min 4 nos. of power sockets in each floor on either side
B.2) 3 Phase power outlets FLP/ Non -FLP plug sockets	One number each 32 A power sockets in each floor on either side
B.3) 3 Phase power outlets FLP/ Non -FLP plug sockets	One number each 63 A power sockets wherever required i.e. 0 m, 11 m, 23 m, 33 m, 42 m, 60 m, 64 m on either side
B.4) Air-circulators exhaust fans, Water coolers	In the portal areas
2. UPS POWER REQUIREMENTS:	Single phase 16 A plug sockets at the catwalks on the required levels on checkout rack side Single phase 16 A flame proof, group-II B plug sockets at different levels One number in each chain on each level.
3. MECHANISM LOADS 3.1) Machine/Equipment	1) Motor control centres for doors and platforms 2) EOT crane 3) elevators 4) Mobile launch pedestal 5) 50% lighting (approx.) and air circulators located near to working platforms MD- 300 kVA on each feeder from DG Change-over Panel- 1 & 2 of TLP substation Single phase 16 A flameproof plug sockets Two nos. on either side at ground level and on all FCVRPs 3 Phase 30 A and 60 A flameproof plug sockets One each on either side at ground level
4. VENTILATION 4.1) Ceiling wall mounted fans	One each in all rooms and one number of air circulators each on both sides of all FCVRPs
4.2) Exhaust fans	--

5. TYPE OF WIRING	Surface cable. FRLS armoured cable with copper stranded conductor. Suitable cable tray arrangement to be planned in all areas
6. POWER SOURCE	SVAB S/S for normal supply. TLP s/s for UPS and DG supply
7. EARTHING(Static/Power/ Lightning)	As per standard practice
8. LIGHTNING PROTECTION	Shall be provided with verticals on the roof of SVAB with horizontal conductors suspended over the length and with suitable down conductors which provides 30 degree cone of protection.

c. Air- Conditioning Works

The building is air-conditioned and necessary AHUs, air cooled Chillers with necessary GI ducting, seam less MS pipes and associated accessories are in the scope of work. 25 + 2^0C and RH upto 60% by providing to all levels of the buildings.

The design and specifications will be supplied by the Department.

d. Twin Rail Track

Function

To transport the Mobile Launch Pedestal with fully assembled vehicle from SVAB to Pad and vice versa using a diesel powered hauler.

Salient Features

- The track is of twin rail type (rail spacing 750 mm) with a gauge of 14m.
- Designed for 150 t bogie wheel load arrived at considering the heavy vehicle, MLP & AUT weights
- A concrete road shall be laid between the tracks to move the MLP with vehicle using road hauler whose axle load will be 30.0 t. Curved track with minimum 600 m radius of curvature to interconnect the integration facility with SLP and TLP.
- Track changeover provision with manually replaceable rail pieces or mechanized arrangement (if feasible) of general rail transportation systems.

Annexure-2

Vendor Evaluation Format for SVAB Civil, Electrical and A/C Works

S. No	Description	Vendor Response
1.	Name of the company Registered office Address :	
2.	Type of the Company (Proprietary/Pvt.Ltd/Public Ltd/Joint Venture/Consortium) :	
3.	If Company is Consortium please provide the signed copy Consortium Agreement document. :	
4.	Registration number & certificate :	
5.	Name & Address of the Office of the Chief Executive of the Company :	
6.	Contact person for this tender with name & address and contact number :	
7.	Locations of the Branches of Company (if any) :	
8.	From which year the Company is in operation in similar works :	
9.	Annual turn-over of the company for last 3 years :	
10.	IT returns for the last 3 years (copy of TDS) to be enclosed :	
11.	Profit after Tax for last 3 years pl. enclose the balance sheet for 3 years :	

S. No	Description	Vendor Response		
	In Rs. Lakhs only	**2010-11**	**2011-12**	**2012-13**
	Total assets (i) :			
	Current assets (ii) :			
	Total liabilities (iii) :			
	Current liabilities (iv) :			
	Net Worth (i-iii) :			
	Working capital (ii-iv) :			
	Turnover Rs. in lakhs :			
	Profit/Loss in Rs. lakhs :			
12.	Details of availability of construction machinery / equipment (batching plant/ transit mixers / concrete pumps/ boom placers / tower cranes etc.	**Machine**	**Qty**	**Location of deployment**
13.	Manpower details with Experience in Years :	**Description**	**No. of Persons**	**Remarks**
		Admin&Acct		
		Engineers		
		Supervisor		
		Workmen (floor)		

S. No	Description	Vendor Response
14.	Quality and Safety System and Quality Management : (i) Whether company got ISO Certification, if Yes enclose Quality manual & policies documents (ii) Whether Company has quality control wing, if yes staff and their qualification (iii) If no for s.no. ii , method adopted for quality assurance (iv) List of quality control equipment company likely to deploy for this project (v) Safety precautions taken at site for personnel engaged on works, including insurance policies like CAR and personal accident policy plant machinery and details of safety equipments materials purchased possessed /proposed to be used on works	
15.	The major customers for whom similar works are provided (Enclose copies work completion certificates by users & Purchase Orders) :	
16.	Any customers feedback on the services which is in writing (Pl. enclose copies) :	

18. Details of similar type of works value > Rs. 100 crores which are completed during last 5/10 years

Sl. No	Full postal address of the client with Contact Person	Description of the work	Value of the work (Rs. in Lakhs)	Completion Time as per PO	Actual period of completion	Reasons for delay
1						
2						

Note: In order to consider as valid experience, all the experience has to be supported with the completion certificate and purchase order

19. Details of present works being executed by the contractor

Sl. No	Full postal address of the client with Contact Person	Description of the work	Value of the work (Rs. in Lakhs)	No. of staff deployed incl. contract labour
1				
2				

Note: copy of purchase orders may be enclosed.

Annexure-III

Pre-Qualification Criteria

1. Party shall have experience in executing similar tall buildings with RCC / Masonry construction and with deep pile foundation.
2. Party shall have executed at least one work of value Rs. 170 crores each or two works of Rs 100 crores each. (work is defined in one single work order)
3. Annual turn over of the party shall be more than Rs. 500 crores.
4. Party shall have sufficient construction machinery like batching plant, Transit concrete mixers, concrete pumps, boom placers, tower cranes sparable for the project to complete the project with in 24 months.
5. Party shall be a prime construction contractor having experience in executing turn key contracts including electrical and Air-conditioning works of similar magnitude.
6. Supplier shall submit a solvency certificate for 100 crores from a reputed nationalized bank.